Regulatory Submittal Part III
Health & Safety Plan

Remediation and Deconstruction of
Fiterman Hall – 30 West Broadway
New York, New York

Prepared for:

Dormitory Authority of the State of New York
The City University of New York

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ATTACHMENTS

CONTACTS/EMERGENCY TELEPHONE NUMBERS

PROJECT NAME: FITERMAN HALL SITE REMEDIATION AND DECONSTRUCTION

THE FOLLOWING ARE THE BUSINESS AND HOME TELEPHONE NUMBERS WHERE PROJECT PERSONNEL CAN BE REACHED AT ALL TIMES. IN ADDITION, THE EMERGENCY TELEPHONE NUMBERS OF OTHER VITAL AGENCIES ARE LISTED.

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EMERGENCY PLAN

Building Evacuation

In the event evacuation of the building is required on an emergency basis, the following shall be incorporated to the extent possible. All personnel working in the potentially impacted areas shall be given the opportunity to read this section of the Health and Safety Plan (HASP). The remainder of the attached HASP will be implemented as conditions allow.

A. PROTECT WORKERS POTENTIALLY EXPOSED TO BUILDING CONTAMINANTS

1. Notify workers that levels of asbestos and additional contaminants above background levels may be present in building dust, contents, and building components.
2. Avoid ingesting dust.
3. Avoid inhaling dust.
4. Minimize contact with the dust, contents and building components to the extent possible.
5. Wear protective coveralls or disposable coveralls to facilitate cleanup of workers.

B. AVOID SPREAD OF CONTAMINATION

1. Limit activities that promote transport of dust
2. Do not remove equipment which has been in contact with potential contamination until it has been checked and released.

C. MINIMIZE POTENTIAL PUBLIC CONTACT

1. Limit access using barricades, temporary fencing, “jersey barriers.”
2. Control, to the extent possible, off-site tracking by vehicles, potentially contaminated boots or clothing by workers.

D. DISPOSAL

1. Any removed materials should be disposed of as required by law.

E. NOTIFY AUTHORITIES

1. Notify Agencies identified on the enclosed emergency notification list (Page 5)

Designated Assembly Area: In the event of an evacuation the designated assembly point for site personnel is: Northeast Corner of World Trade Center Site – West side of Church Street North of New Subway Entrance.

Reporting Emergencies: All site personnel, upon discovering an emergency situation, shall immediately call 911. The Contractor Safety Officer (CSO) shall be notified immediately thereafter and will assume responsibility as the onsite representative to the First Responders. The CSO shall immediately notify OWNER.

Note: Any explosion, regardless of size or type, any structural failure, fires and certain power failures will require a complete building evacuation.

1.0 SCOPE OF PLAN

The following Health and Safety Plan (HASP) will be utilized and modified as necessary in order to minimize and prevent exposures to hazardous substances and conditions related to all remediation and deconstruction of the building located at 30 West Broadway in New York City (the Building). All personnel assigned to this project will be required to review thoroughly the contents of the HASP and to strictly adhere to the policies and procedures listed herein. This HASP is for use only by DASNY/CUNY and their designated contractors, consultants, and approved Site visitors.

USEPA, and other Regulatory Agencies (Regulators), are not considered visitors and will be required to conform to their own Health and Safety Plans.

This plan meets the requirements of OSHA 29 CFR 1910.120, Hazardous Waste Operations and Emergency Response, and applicable subparts of OSHA 29 CFR 1926, 1910 and 10 CFR. Visitors will be required to review the health and safety plan and read and sign the visitor information sheet (Figure 1.1).

The Personal Protective Equipment (PPE and additional safety and health procedures and equipment requirements presented in this HASP are deemed the minimally acceptable standard for working at this Site. Subcontractors can make individual decisions to upgrade the equipment requirements for each PPE level to ensure the hazards presented by a specific activity are controlled and worker exposure is minimized.

Figure 1.1

VISITOR INFORMATION

NOTICE TO VISITOR:

ALL VISITORS MUST BE ESCORTED AT ALL TIMES WHILE ON THIS SITE

CAUTION: Chemical contamination may be present on this site.

CONTROLLED AREAS:

Do not enter areas with these signs unless you have an escort or the Contractor Safety Officer has given specific approval and you understand access limitations.

The Contractor Safety Officer will provide you with instructions.

You may be required to wear protective clothing in controlled areas.
No smoking, eating, drinking or chewing in controlled areas.

NO EXCEPTIONS.

Name_____

Date_____

2.0 SAFETY MANAGEMENT

The following safety management structure will be utilized for the implementation, administration, and monitoring of the HASP.

2.1 CONTRACTOR SAFETY OFFICER (CSO)

The Contractor shall have a CSO licensed as a New York City Site Safety Manager (NYCSSM) on-site throughout the project. The CSO shall assume on-site responsibility for the HASP. The CSO or designee shall monitor and maintain quality assurance of the HASP until project completion. Principal duties of the CSO include:

- Review project background data,
- Administer and enforce the HASP,
- Evaluate the adequacy of PPE to be used by Site personnel,
- Conduct required on-site training except tailgate safety meetings that will be conducted by the Field Team Leader,
- Brief visitors on work Site conditions,
- Administer personnel air monitoring procedures.
- Notify the Environmental Consultant's CIH of any need to change or amend any aspect of the approved Site HASP.
- Coordinate the health and safety activities of all the Contractor and Subcontractor personnel to ensure the requirements of the HASP are followed.
- Communicate with all parties when changes occur on-site or when conditions impacting the site occur concerning the response actions to be taken.

The CSO or designee has the authority to stop work in the event conditions develop that pose an unreasonable risk to Site personnel or persons in the vicinity. Additionally, the CSO shall ensure that Subcontractors perform the following operations under the direct on-site supervision of OSHA Competent Persons (provided by the Subcontractors for each task as necessary):

- General Construction (29 CFR 1926.20)
- Unsanitary Conditions (29 CFR 1926.27)
- Rigging (29 CFR 1926.251)
- Scaffolding (29 CFR 1926.450)
- Ladders (29 CFR 1926.1053)
- Personal Fall Arrest Systems (29 CFR 1926.500 and .502)
- Ear Protection (29 CFR 1926.101)
- Cranes and Derricks (29 CFR 1926.550)
- Materials Hoists, Personnel Hoists and Elevators (29 CFR 1926.552)
- Demolition (29 CFR 1926.850)
- Welding/Cutting on surfaces covered by protective coatings (29 CFR 1926.354)
- Excavation (29 CFR 1926.650)
- Lead (29CFR 1926.62)
- Asbestos (29 CFR 1926.1101)
- Cadmium 1926.1127
- Powered Platforms for Building Maintenance, 29 CFR 1910.66
- Hazardous Waste Operations and Emergency Response, 29 CFR 1926.65

- Hazardous chemicals brought on-site and used in the abatement and demolition: OSHA Hazard Communications Standard (29 CFR 1910.1200).
- Additional monitoring and PPE for lead, cadmium and chromium associated with torching/ cutting of painting surfaces: Lead in Construction Standard [29 CFR 1926.62(d)(2)(iv)] and the Cadmium in Construction Standard [29 CFR 1926.112].

2.2 OWNER'S ENVIRONMENTAL CONSULTANT

The Owner's Environmental Consultant shall provide a Certified Industrial Hygienist (CIH) and field industrial hygiene personnel during the project fieldwork. This work in no way relieves the Contractor or its Subcontractors of their responsibility to manage and update the site HASP, or to conduct personal sampling and testing required by the specification or by OSHA. The CIH shall be available to provide information regarding site conditions as determined by the investigations, and shall direct field industrial hygiene personnel responsible for the execution of the Environmental Community Air Monitoring Program (ECAMP) during the Remediation and Deconstruction Phases, and monitoring of the Remediation Phase as required by NYS ICR 56. The CIH may review any health and safety activities at the site, review monitoring data generated during the site work, conduct walk-throughs and safety and health spot field inspections, and advise the Owner and Contractor of unacceptable conditions identified that may affect safety and health for personnel or the environment. The responsibilities of the Owner's Environmental Consultant shall include monitoring for visible emissions as detailed in the ECAMP. None of the above activities relieves the Contractor from responsibility for Health & Safety management at the site.

3.0 PERSONNEL RESPONSIBILITIES

The CSO or designee will administer and supervise the HASP at the work-site level. He/she will monitor all operations and will be the primary on-site contact for health and safety issues, and will have full authority to stop operations if conditions are judged to be hazardous to on-site personnel or the public.

The CSO will brief all Site personnel on the contents of the HASP. Personnel will be required to review the HASP, and have the opportunity to ask questions about the planned work or hazards. The Field Team Leader will conduct tailgate safety meetings to familiarize the Site personnel with Site conditions, boundaries, and physical hazards. Site personnel will conduct their assigned tasks in accordance with the HASP at all times.

If at any time Site personnel observe unsafe conditions, faulty equipment or other conditions that could jeopardize personnel health and safety, they are required report their observations immediately to the CSO or their Field Team Leader.

Work zones to be established at the Site are defined in *Regulatory Submittal Part I – Work Plan.* These zones include clean/support zones, decontamination zones, and exclusion zones. Although the clean/support zones are anticipated to remain fixed, other zones will move about the Site as remediation and deconstruction work progresses.

All personnel on site will comply with the following:

1. Participate in initial site orientation as described in Section 5.0, and daily safety meetings, and shall provide any required documentation, medical clearance, fit test, asbestos certification, etc. prior to starting work on the site. Documentation requirements are determined by activities to be performed.

2. Sign the HASP Acknowledgement Form and other required documents after orientation to indicate that they participated in orientation and understood the information presented in orientation.

3. Follow the designated safety and health procedures; be alert to the hazards associated with working on the site, and exercise reasonable caution at all times.

4. Direct any questions or concerns about this HASP to the on-site Contractor Project Manager and/or the CSO or their Field Team Leader.

5. Take all reasonable precautions to prevent injury to themselves and to their fellow employees, and being alert to potentially harmful situations.

6. Obey all applicable laws and regulations relating to health and safety.

7. Ensure that activities do not impact the neighboring community.

8. Perform only those tasks that they have been trained to complete and can do safely.

9. Notify their supervisor of any special medical conditions (i.e., allergies, contact lenses, diabetes) that may affect their ability to perform certain tasks.

10. Notify their supervisor of any prescription and/or non-prescription medication that they may be taking that might cause drowsiness, anxiety, or other unfavorable side affects.

11. Learn and comply with Site security requirements.

12. Comply with the Site's prohibition on drug and alcohol use, smoking, horseplay, and restricted eating/drinking areas.

13. Practice good housekeeping by keeping the work areas neat, clean and orderly.

14. Immediately report all injuries, incidents and near-misses to the designated supervisor.

15. Properly use PPE specified by the contractor and this HASP.

16. Properly maintain their designated PPE per manufacturers' recommendations.

17. Comply with the HASP and all health and safety recommendations and precautions.

18. Notify their supervisor of any Site conditions or concerns which are not addressed by the protective measures specified in this HASP, or which are addressed but the employee does not understand the protective requirements specified herein.

4.0 HAZARD ASSESSMENT

The following represents potential hazards associated with this project.

4.1 CHEMICAL HAZARDS

Principal Contaminants (Known or Suspected) *

Fibrous:
- Asbestos
- Man-made Vitreous Fibers

Metals:
- Antimony
- Barium
- Beryllium
- Cadmium
- Chromium (III)
- Copper
- Lead
- Manganese
- Mercury (Vapor & Particulate)
- Nickel
- Zinc

Organics:
- Dioxins/Furans
- PAHs
- PCBs

Particulate:
- Crystalline Silica

* Contaminants suspected in WTC dust, termed “Contaminants of Potential Concern (CoPCs)”. WTC dust with assumed varying concentrations of CoPCs is present in and around the building.

These primary routes of entry to the body will be considered:

Route	Entry Made Via
Inhalation	> Airborne dust containing chemical contaminants
Ingestion	> Airborne dust containing chemical contaminants. > Improper or poor personal hygiene practices.
Eye and Skin	> Direct contact with contaminants. > Airborne dust containing chemical contaminants. > Improper or poor personal hygiene practices.

4.2 PHYSICAL HAZARDS

Before field activities begin, the CSO will conduct a Site reconnaissance to identify any real or potential hazards created from Site activities. Physical hazards associated with damage to the building resulting from the collapse of the WTC and hazards inherent to construction activities and power-operated equipment may exist (e.g., excessive heat or cold; excessive noise; inclement, weather; manual lifting/handling of heavy objects; heavy equipment operation; poor housekeeping; rough terrain; compromised structural integrity; traffic; cranes, hoists and other lifting equipment;, aerial lifts and manlifts; working at elevation; use of scaffolding; hazardous materials use; potential utility and electrical sources; use of hand and power tools; slips and falls; etc.).

4.2.1 Heat Stress

Field activities in hot weather create a potential for heat stress. The warning symptoms of heat stress include fatigue; loss of strength; reduced accuracy, comprehension and retention; and reduced alertness and mental capacity. To prevent heat stress, personnel shall receive adequate water supplies and electrolyte replacement fluids, and maintain scheduled work/rest periods.

The Field Team Leader or designee shall continuously visually monitor personnel to note for signs of heat stress. In addition, field personnel will be instructed to observe for symptoms of heat stress and methods on how to control it. One or more of the following control measures can be used to help control heat stress.

Provision of adequate liquids to replace lost body fluids. Employees must replace body fluids lost from sweating. Employees must be encouraged to drink more than the amount required to satisfy thirst, 12 to 16 ounces every half-hour is recommended. Thirst satisfaction is not an accurate indicator of adequate salt and fluid replacement. Replacement fluids can be commercial mixes such as Gatorade.

Establishment of a work regimen that will provide adequate rest periods for cooling down. This may require additional shifts of workers.

Breaks should be taken in a cool and shaded rest area (77 degrees is best).

Employees shall remove impermeable protective garments during rest periods.

Employees shall not be assigned other tasks during rest periods.

All employees shall be informed of the importance of adequate rest, acclimation, and proper diet in the prevention of heat stress.

4.2.2 Cold Stress

Persons working outdoors in temperatures of 40 degrees and below may suffer from cold exposure. During prolonged outdoor periods with inadequate clothing, effects of cold exposure may even occur at temperatures well above freezing. Cold exposure may cause severe injury by freezing exposed body surfaces (frostbite) or result in profound generalized

cooling, possibly causing death. Areas of the body which have high surface area-to-volume ratios such as fingers, toes and ears are the most susceptible to frostbite.

Two factors influence the development of a cold injury: ambient temperature and the velocity of the wind. Wind chill is used to describe the chilling effect of moving air in combination with low temperature. For instance, 10° F with a wind of 15 miles per hour (mph) is equivalent in chilling effect to still air at -18°F.

As a general rule, the greatest incremental increase in wind chill occurs when a wind of 5 mph increases to 10 mph. Additionally, water conducts heat 240 times faster than air. Thus, the body cools suddenly when external chemical-protective equipment is removed if the clothing underneath is perspiration-soaked.

Local injury resulting from cold is included in the generic term “frostbite”. There are several degrees of damage.

If the field activities occur during a period when temperatures average below freezing, the following guidelines will be followed:

Frostbite of the extremities can be categorized into:

- Frost nip or incipient frostbite: Characterized by sudden blanching or whitening of skin.
- Superficial frostbite: Skin has a waxy or white appearance and is firm to the touch, but tissue beneath is resilient.
- Deep frostbite: Tissues are cold, pale, and solid; extremely serious injury.

Prevention of frostbite is vital. Keep the extremities warm. Wear insulated clothing as part of one’s protective gear during extremely cold conditions. Check for symptoms of frostbite at every break. The onset is painless and gradual – the frostbite victim might not know that he has have been injured until it is too late.

To administer first aid for frostbite, bring the victim indoors and rewarm the areas quickly in water 95° to 100°F. Give individual a warm drink - not coffee, tea, or alcohol. The victim should not smoke. Keep the frozen parts in warm water or covered with warm clothes for 30 minutes, even though the tissue will be very painful as it thaws; then elevate the injured area and protect it from injury. Do not allow blisters to be broken. Use sterile, soft, dry material to cover the injured areas. Keep victim warm and get immediate medical care.

4.2.3 Electrical Hazards

Overhead power lines, downed electrical wires, buried cables and improper use of electrical extension cords can pose a danger of shock or electrocution. All Site personnel should immediately report to the Field Team Leader any condition that could result in a potential electrical hazard.

The Field Team Leader will notify Site personnel during the safety meetings of the locations of known underground cables and utilities.

4.2.4 Noise Hazards

Operation of equipment may present a noise hazard to workers. Site personnel will utilize hearing protection when noise levels are determined to be in excess of 29 CFR 1910.95 requirements. Noise monitoring will be performed to determine noise levels.

4.2.5 Overt Chemical Exposure

Typical response procedures include:

SKIN CONTACT:
Use copious amounts of soap and water. Wash/rinse affected area thoroughly, then provide appropriate medical attention if symptoms warrant. Eye wash shall be provided on-site at the work zone and support zone as appropriate. If affected, eyes should be continuously flushed for a minimum of 15 minutes.

INHALATION:
Move to fresh air and transport to hospital if symptoms warrant. Decontaminate as other actions permit.

INGESTION:
Transport to emergency medical facility if symptoms warrant. Decontaminate as permitted by other requirements.

PUNCTURE WOUND OR LACERATIONS:
Transport to emergency medical facility if symptoms warrant. Field Team Leader will provide Material Safety Data Sheets (MSDS) to medical personnel as requested. Decontaminate as permitted by other requirements.

4.2.6 Adverse Weather Conditions

In the event of adverse weather conditions, the Field Team Leader will determine if work can continue without endangering the health and safety of field workers. Some items to be considered before determining if work should continue are:

Potential for heat stress and heat-related injuries.
Potential for cold stress and cold-related injuries.
Treacherous weather-related working conditions.
Limited visibility.
Potential for electrical storms or high winds.

4.2.7 Biological Hazards

Biological concerns in the work area are primarily, insects, rodents, and mold/fungi.

4.2.7.1 Insects

The presence of insects shall be addressed by personnel as the insects are encountered. When a stinging or poisonous insect, such as a bee or spider, is identified, personnel should exercise caution to avoid being bitten or stung for example by using tools to move material. In the event that a person is stung or bitten, the incident shall be reported to the Site Manager for the Subcontractor who shall report the incident to the CSO. The Site Manager for the Subcontractor shall initiate actions to manage and address the bite or sting. Personnel who are allergic to insect bites and stings should identify their allergy to their employer.

4.2.7.2 Rodents

In the event that rodents or animal pests are identified or observed on-site, the Subcontractor Manager should report the incident to the Contractor CSO. The Contractor shall be responsible for evaluating the condition and implementing steps to eliminate rodents on the site.

4.2.7.3 Mold/Fungi

The initial building walk-though by Airtek environmental identified mold contaminated building materials/components within the Building. The identification of additional mold/fungi on-site will be made based on visual inspections of building materials. When mold/fungi are identified, the removal of impacted materials shall be addressed concurrently with Asbestos Abatement Activities. Removal and handling measures shall be consistent with the NYC Department of Health and Mental Hygiene "Guidelines on Assessment and Remediation of Fungi in Indoor Environments."

4.3 MEDICAL PROGRAM

Medical evaluation and surveillance are not anticipated to be required for the remediation and deconstruction activities proposed, based on levels and classes of contamination documented as present. The determination of the need for medical evaluation will be based on area and/or personnel monitoring and review and recommendations from the Contractor's industrial hygiene personnel. If requested, personnel shall be required to receive medical evaluation in accordance with 29 CFR 1910.120. Personnel who receive a medical evaluation will be notified by the medical contractor as to the outcome of their evaluation. This will be in the form of a confidential report addressed to the individual and will contain a breakdown of the clinical findings. In addition, it will indicate any areas of concern which would justify further medical consultation by the individual's personal physician. In the event that the areas of concern are of a severe nature, a follow-up notification will be made to the individual by the medical consultant to answer any questions the employee may have.

4.3.1 Personnel Monitoring

Each Subcontractor and trade employer shall perform personnel air monitoring as described in Section 7.2. The determination of the need for personnel monitoring may be reviewed and amended based on area monitoring and review and recommendations from the Contractor's industrial hygiene personnel. If requested, project personnel shall participate in a personal exposure monitoring program administered by the Owner's Environmental Consultant. Monitoring by the Owner's Environmental Consultant in no way relieves the

Contractor from its responsibilities under OSHA and/or the Specifications.. The Contractor and Subcontractors shall maintain records of all chemical exposures incurred by their personnel. These records will be maintained in an up-to-date manner to comply with the requirements of OSHA. The CSO shall review the results of personal exposure monitoring to determine compliance with exposure limit requirements.

4.3.2 Emergency Medical Treatment

Emergency first aid should be administered on-site as appropriate. Depending on the severity of the injury, the patient should be transported to the nearest medical facility, if needed. Treatment of the injury is of primary concern and decontamination a secondary concern.

The Field Team Leader will complete the appropriate incident report, if warranted. See Section 4.4, Accident and Incident Reporting.

An emergency first-aid station will be established and will include a first-aid kit for onsite emergency first aid.

Provisions for emergency medical treatment shall be integrated with the following guidelines:

- At least one individual qualified to render first aid and Cardiopulmonary Resuscitation (CPR) shall be assigned to each shift.
- Emergency first aid stations in the immediate work vicinity.
- Phone numbers and procedures for contacting ambulance services, fire department, police, and medical facilities shall be conspicuously posted.
- Maps and directions to medical facilities, and evacuation routes and gathering area locations shall be posted conspicuously around the Site.

4.3.3 Medical Response Equipment

The following medical response equipment shall be available on-site for the duration of the site activities.

- Eyewash Stations: The location of emergency eyewash stations shall be determined by the CSO. Each station shall provide a continuous spray of a rate of 0.4 gallons per minute for at least 15 minutes. This station shall be inspected daily to ensure proper operation.
- First Aid Kits: The locations of fixed and/or portable kits shall be determined by the CSO. As a general guideline, each Subcontractor shall provide, at minimum, one first aid kit for every 20 employees and shall station it within the work area (for Level D operations) or directly outside the decontamination area (contaminant reduction zone) (for Level C or Level B)

- Automated External Defibrillator (AED): an AED shall be located within the Contractor's on-site field office.

The locations of these equipment stations shall be determined by the CSO at the site and incorporated into this HASP upon initiation of each task. The Contractor CSO shall maintain responsibility for the incorporation of this information into this HASP.

The locations of eyewashes, first aid kits, AED, and the procedures for using and reporting an incident shall be presented during the initial on-site training. The Contractor CSO shall make all personnel aware of the locations and use of this equipment prior to engaging in site work activities.

4.4 ACCIDENT and INCIDENT REPORTING

All accidents, injuries, or incidents will be reported to the CSO. This accident/incident will be reported as soon as possible to the employee's supervisor. An Accident/Incident Form will be completed by the Field Team Leader, and a copy will be forwarded to the Project Manager. A copy of the form is shown as Figure 4.1.

FIGURE 4.1 (PAGE 1 OF 3)
ACCIDENT/EXPOSURE INVESTIGATION REPORT

COMPANY			DATE
INVESTIGATION TEAM			
EMPLOYEE'S NAME & ID			
SEX	AGE	JOB DESCRIPTION	
DEPARTMENT & LOCATION			
ACCIDENT DATE & TIME			
DATE & TIME ACCIDENT REPORTED TO SUPERVISOR			
NATURE OF INCIDENT			
NATURE OF INJURY			
REFERRED TO MEDICAL FACILITY/DOCTOR ☐ YES ☐ NO			
EMPLOYEE RETURNED TO WORK ☐ YES DATE/TIME _____ ☐ NO			
☐ INJURED EMPLOYEE INTERVIEW/STATEMENT - ATTACHED			
WITNESSES			
☐ WITNESSES INTERVIEWS/STATEMENTS ATTACHED			
☐ PHOTOGRAPHS OF SITE - ATTACHED			
☐ DIAGRAMS OF SITE - ATTACHED			
EQUIPMENT RECORDS - ATTACHED - REVIEWED	☐ YES	☐ NO	
ACCIDENT/EXPOSURE INCIDENT DESCRIPTION			

FIGURE 4.1 (PAGE 2 OF 3)
ACCIDENT/EXPOSURE INVESTIGATION REPORT

ACCIDENT DESCRIPTION		
DATE & TIME	LOCATION	
EMPLOYEES INVOLVED		
PREVENTIVE ACTION RECOMMENDATIONS		
CORRECTIVE ACTIONS COMPLETED	MANAGER RESPONSIBLE	DATE COMPLETED

EMPLOYEE LOST TIME - TEMPORARY HELP - CLEANUP - REPAIR - DISCUSSION			
ACCIDENT COST ANALYSIS	INVESTIGATION	COMPLIANCE	TOTAL COST
MEDICAL			
PRODUCTION LOSS			

REPORT PREPARED BY		DATE COMPLETED
SAFETY COMMITTEE REVIEW	☐ YES	☐ NO
CORRECTIVE ACTION		DATE STARTED
SAFETY COMMUNICATION NOTICE PREPARED	DATE	
SAFETY DIRECTOR SIGNATURE		

FIGURE 4.1 (PAGE 3 OF 3)
ACCIDENT/EXPOSURE INVESTIGATION REPORT

ACCIDENT DESCRIPTION	
DATE & TIME	LOCATION
EMPLOYEES INVOLVED	
EMPLOYEE INTERVIEW/STATEMENT - INJURED EMPLOYEE - WITNESS	
EMPLOYEE NAME	
INTERVIEWED BY	

ACCIDENT DIAGRAM/PHOTOGRAPHS

5.0 TRAINING & ORIENTATION

All Contractor Site personnel shall be trained and certified as applicable in accordance with 29 CFR 1910.120.

5.1 PROJECT AND SITE-SPECIFIC ORIENTATION

Prior to project start-up, all assigned personnel shall receive an initial project and site-specific training session. The Contractor CSO shall ensure that all site employees receive this hazard awareness training.

This orientation shall include, but not be limited to, the following areas:

- Review of the Health and Safety Plan;
- Review of applicable chemical and physical hazards present at the work site and their associated health risks;
- Location of the MSDS files.
- Proper use of all tools and equipment to complete the scope of work activities;
- PPE levels to be used by Site personnel;
- Site security control;
- Emergency response and evacuation procedures;
- Project communication;
- Required decontamination procedures;
- Prohibited on-site activities;
- Work practices to reduce or prevent exposure to hazardous chemicals.
- Site alarms, emergency response procedures, and locations of emergency staging, evacuation and lay down areas.

NOTE ON CoPC/Asbestos: Because of the presence of WTC dust with assumed varying concentrations of CoPCs, the Contractor shall ensure that all site employees receive the required training concerning asbestos as well as all applicable Hazard Communication training. Personnel who have the potential to disturb, handle or abate Asbestos-Containing Building Materials (ACBM) shall have completed appropriate training and have appropriate current certifications as required according to New York City and New York State regulations.

Hazardous Waste Operations and Emergency Response (HAZWOPER) Training Requirement: Personnel entering the exclusion or contamination reduction zones for the purpose of performing cleanup abatement activities must have current 40 hour training as outlined by 29 CFR 1910.120(a)(i) and appropriate annual refresher training as required. (This HAZWOPER training requirement may be removed should sampling indicate that this training requirement is not necessary.)

5.2 VISITOR ORIENTATION

The Owner, their authorized representative(s) and any representative of a regulatory or other agency having jurisdiction over the project shall be considered an Authorized Visitor.

During the Remediation Phase all visitors entering the Exclusion Zone (EZ) must provide proof of an up-to-date fit-testing and medical clearance, and completion of asbestos certifications required

for the employee's scope of work. In addition each visitor will receive site-specific training by the Contractor CSO that includes:

- Location and description of potential chemical and physical hazards and risks
- Required PPE
- Areas of the site that may be closed to visitors
- The site evacuation and emergency procedures, and
- Other topics as deemed appropriate by the Contractor CSO

All non-essential personnel and visitors who plan to enter the EZ will be briefed on the HASP requirements and 10 CFR 1912 requirements prior to entry with a trained Site escort.

5.3 SAFETY TAILGATE MEETINGS

Before the start of the work week, on Monday morning, the Field Team Leader will assemble the Site personnel for a brief safety meeting. The purpose of these meetings will be to discuss project status, problem areas, conditions, safety concerns, PPE levels and to reiterate HASP requirements. The Field Team Leader will complete a Safety Meeting Report (Figure 5.1) to indicate the contents of the meeting and the attendees.
Topics to be addressed include:

- Use and maintenance of PPE
- Evacuation routes;
- Warning signals;
- Maintaining line-of-sight and communications;
- Rehearsal of scheduled activities;
- Hospital routes;
- Locations of safety equipment;
- Previous violations of the safety plan and procedures or changes to the program to correct the violation;
- Anticipated hazards for the day's work activities;
- Any changes to the requirements for levels of PPE;
- The locations of work zones; and
- General site conditions.

5.4 FIRST AID

At least one (1) individual, trained and qualified to administer first aid and CPR in accordance with American Red Cross requirements, will be present at the Site.

5.5 SAFE WORK PERMIT

Site workers in special work conditions such as confined space, hot work, trenching, or other physical hazards, must be skilled at such work and trained to recognize these as special work conditions. Confined space is defined by OSHA 1910.146.

5.6 EMERGENCY RESPONSE TRAINING

Emergency response training shall be provided to all on-site-personnel as part of the site-specific safety and health awareness training. The emergency response training shall be conducted by each Subcontractor's Safety Officer for her respective employees.

At a minimum, the topics of this training shall include the following:

- Location of all site emergency equipment
- Response procedures for fires
- Response procedures for injuries and accidents
- On-site/off-site response resources
- Emergency site operations shut down procedures
- On-site "Chain of Command"
- Designated on-site emergency meeting location
- Recognition of evacuation signals and alarms

SAFETY MEETING REPORT (PAGE 1 OF 2) (FIGURE 5.1)

DATE	DIVISION	DEPARTMENT	DURATION OF MEETING	
			FROM: ☐ A.M. ☐ P.M.	TO: ☐ A.M. ☐ P.M.
NUMBER PRESENT	NUMBER ABSENT	MEETING CONDUCTED BY	DID MEETING INCLUDE REQUIRED TRAINING? ☐ YES (DESCRIBE BELOW) ☐ NO	

SUPERVISOR'S PRESENTATION	DISCUSSION OF SAFE / UNSAFE WORK PRACTICES, MATERIALS, PRECAUTIONS, HAZARDS, EQUIPMENT FAMILIARIZATION, ETC.
EMPLOYEE FEEDBACK	COMMENTS, QUESTIONS, COMPLAINTS, ETC.
SUPERVISOR'S CORRECTIVE ACTION PLAN	KNOWN PLANS FOR CORRECTION, PARTS ON ORDER, ITEMS TO BE DISCUSSED WITH DEPART. HEAD, AND CORRECTION OF ITEMS PREVIOUSLY SUBMITTED
DEPARTMENT HEAD COMMENTS	RESOLUTION OF QUESTIONS, ITEMS OR ISSUES RAISED IN MEETING OR WITH SUPERVISOR

SUPERVISOR	DEPARTMENT HEAD
FACILITY MANAGER	HAVE EMPLOYEES ATTENDING SIGN ON REVERSE SIDE. FORWARD A COPY TO THE LOCAL SAFETY DEPARTMENT

Safety Meeting Report (Page 2 of 2)

To Be signed by all Employees attending the meeting			
I have received and understand the information and/or training indicated on the reverse side.			
Signature	**Date**	**Signature**	**Date**

List All Employees Absent from the Meeting	

Figure 5.2
Fiterman Hall Remediation and Deconstruction
Sample Subcontractor Site Safety Plan

SUMMARY INFORMATION

DATE: _____ UPDATE: _____

PROJECT NAME: _____ PROJECT NO: _____

LOCATION: _____

SITE CONTACT AND PHONE NUMBER: _____

TYPE OF FACILITY: (active or inactive - describe previous use, previous agency action, soil type, topography, surrounding community)

PLAN PREPARED BY: _____

SITE SAFETY OFFICER: _____ CPR/FIRST AID TRAINED STAFF: _____

REVIEWED BY: _____ DATE: _____

WORK SCOPE/CONSTRUCTION/INVESTIGATION
Task 1 _____
Task 2 _____
Task 3 _____

PROPOSED START DATE: _____

UNUSUAL FEATURES/SITE SECURITY (include site map): _____

UTILITIES: ☐ Marked ☐ Scheduled Meet Date _____ Time _____

ANALYTICAL DATA (to be summarized below or attached, if available)

_____
_____

CONFINED SPACE: ☐ Yes ☐ No (If yes, describe and address permitting and entry procedures in an attachment.) _____

_____

AIR MONITORING:
Monitoring equipment: HNu meter with 10.2 eV lamp or _____
Action level = 15 PID units in breathing zone for Level C upgrade. Stop work = 50 PID units in breathing zone.
☐ 0_2 meter, ☐ FID, ☐ Detector tubes, ☐ L.E.L. meter, ☐ Other _____

Other action levels: _____

6.0 COMMUNICATIONS

6.1 GENERAL COMMUNICATIONS

The Field Team Leader will have available at the Site the means for telephone communications, or an equivalent means of communication, for summoning emergency assistance from the fire/ambulance and police departments in the event they are required. The telephone will also act as a direct link to technical personnel for information pertaining to all phases of the project.

6.2 RADIO/TELEPHONES

Short-range walkie-talkies or cellular telephones will be made available to designated personnel working at the Site.

6.3 EMERGENCY WARNING

In the event of an emergency condition, the Field Team Leader will notify project personnel verbally if all are within immediate hearing and via a bullhorn if the Site area is large. The Field Team Leader will also notify visitors present within the area. Site personnel will immediately proceed to a pre-designated assembly area as designated by the Field Team Leader during the daily safety meeting. Personnel will remain in the designated area until further instructions are received by the Field Team Leader.

All communication equipment will be tested at the beginning of each day to verify operational integrity.

6.4 HAND SIGNALS

Hand signals will be used by field teams in conjunction with the buddy system. Hand signals shall be familiar to the entire field team before operations commence and should be reviewed during site-specific training.

Signal	Meaning
Hand gripping throat	Out of air; can't breathe
Grip partner's wrist	Leave area immediately; no debate
Hands on top of head	Need assistance
Thumbs up	OK; I'm all right; I understand
Thumbs down	No; negative

6.5 SITE SECURITY

The following site control measures shall be implemented to protect the public and personnel working on-site.

- Fences, guardrails and access devices, including ladders, stairways, and walking surfaces shall be provided and maintained throughout the project activities in accordance with 29 CFR 1926.

- Barricades, warning signs, temporary lighting and other safety measures shall be provided, as required, to protect site personnel.

- Only authorized personnel will be permitted on the Site in accordance with the requirements of this HASP. Visitors and other non-essential personnel may enter the work area only upon authorization by the Field Team Leader.

- All visitors to the site shall report first to the Contractor field office. Visitor access shall be limited to the Support Zone and Level D operation areas only, and shall be allowed only with the prior consent of the Contractor CSO and the Contractor Site Manager.

- No visitor (other than regulatory inspectors) shall enter a work area unescorted by a Subcontractor or Contractor representative. The presence of any regulatory agency on-site shall be reported immediately to the Contractor Site Manager.

7.0 PERSONNEL EXPOSURE AND AIR QUALITY MONITORING

7.1 AIR QUALITY (DUST)

Due to the nature of the principal contaminants associated with the project, dust suppression will be important as a means of minimizing exposure levels and off-site migration of contaminants. The Field Team Leader will routinely monitor the project area. The OSHA personal exposure limit (PEL) for nuisance dust is 15 mg/m3.

7.2 AIRBORNE CHEMICAL MONITORING

Monitoring for airborne chemical exposure is as important as other occupational safety precautions. Monitoring for airborne chemical contaminants exposure requires the following elements:

- Air sampling for particulates and specified CoPCs,
- Recordkeeping regarding personnel work locations and time in location, and
- Respiratory protective equipment records for devices used by workers in airborne contaminant areas.

By closely monitoring these three elements, a continuous record of personnel exposure to airborne chemical contaminants is maintained.

General methodologies for sample collection and analysis include,

7.2.1 PERSONAL AIR MONITORING

Each Subcontractor and trade employer shall evaluate the need to perform personnel air sampling for the contaminants during Abatement Phase of the project.

The results of personnel monitoring conducted will be reviewed on a daily basis by the Subcontractor Safety Officer to determine if current levels of respiratory protection are adequate.

The subcontractor safety officer shall provide written documentation of this review to the CSO and the subcontractor must immediately report any results that trigger PPE upgrades.

Additional evaluation of samples shall be performed when determined necessary based upon elevated results.

7.3 ACTION LEVELS

7.3.1 Chemical Action Levels

The following table lists the OSHA PEL, site specific Action Level, and trigger levels:

Figure 7-1

Contaminants	OSHA PEL	Action Level (Half value of OSHA PEL)	10 X OSHA PEL (Protection factor for Half-face APR)	100 X OSHA PEL (Protection Factor for Full-face PAPR)
Asbestos	0.1 f/cc	0.05 f/cc	1 f/cc	10 f/cc
Antimony	0.5 mg/m^3	0.25 mg/m^3	5 mg/m^3	50 mg/m^3
Barium	0.5 mg/m^3	0.25 mg/m^3	5 mg/m^3	50 mg/m^3
Beryllium	0.002 mg/m^3	0.001 mg/m^3	0.02 mg/m^3	0.2 mg/m^3
Cadmium	0.005 mg/m^3	0.0025 mg/m^3	0.05 mg/m^3	0.5 mg/m^3
Chromium (III)	0.5 mg/m^3	0.25 mg/m^3	5 mg/m^3	50 mg/m^3
Copper	1 mg/m^3	0.5 mg/m^3	10 mg/m^3	100 mg/m^3
Lead	0.05 mg/m^3	0.025 mg/m^3	0.5 mg/m^3	5 mg/m^3
Manganese	5 mg/m^3	2.5 mg/m^3	50 mg/m^3	500 mg/m^3
Mercury	0.1 mg/m^3	0.05 mg/m^3	1 mg/m^3	10 mg/m^3
Nickel	1 mg/m^3	0.5 mg/m^3	10 mg/m^3	100 mg/m^3
Zinc	5 mg/m^3	2.5 mg/m^3	50 mg/m^3	500 mg/m^3

Personnel shall not be exposed to airborne chemical contaminants such that their short term or time-weighted average exposure exceeds OSHA “Permissible Exposure Levels” or ACGIH “Threshold Limit Values” for the chemicals of concern. To avoid the need for upgrade of personal protection equipment due to airborne contamination, engineering controls such as the use of water to minimize dust levels will be implemented as necessary during abatement activities.

The required level of protection may be modified based on airborne monitoring . All assessments shall incorporate industrial hygiene principles. Engineering controls shall be used prior to assignment of respiratory protective equipment.

Signs shall be posted at entrances to areas where airborne chemical contaminants levels exceed, or have the potential to exceed, 25% of the applicable exposure limit.

8.0 ENGINEERING AND ADMINISTRATIVE CONTROLS

8.1 ENGINEERING CONTROLS

Each Subcontractor shall be responsible for providing and implementing Engineering Controls as a primary means of ensuring worker health and safety, and shall provide the following minimum controls:

- HEPA-filtered air filtration equipment to reduce area dust levels;
- HEPA-filtered Vacuum cleaners;
- Fume eductors with HEPA filters for all hand-powered tools;
- Torching or cutting activities involving lead-based painted materials shall use adequate mechanical or natural exhaust ventilation;
- Barricades, railings or other devices to prevent employee exposure to fall hazards or moving equipment (29 CFR 1926); and
- Other task-specific engineering controls as recommended by OSHA guidelines or as recommended by the Contractor CSO or CIH.

8.2 ADMINISTRATIVE CONTROLS

Each Subcontractor shall be responsible for the provision and/or implementation of the following administrative controls as a secondary means of ensuring worker health and safety:

- Ensure all employees are enrolled in a medical monitoring program as required by OSHA;
- Ensure all employees have current fit-test and training certifications;
- Implement work practices that avoid generating dust whenever possible;
- Require all employees implement decontamination procedures, including washing hands, face, hair and neck upon leaving the work area and before eating, drinking or smoking;
- Remove lead based paint or coatings before cutting, grinding or other activities that would be expected to disturb the lead-based materials, or complying with the provisions of 29 CFR 1926.62; and
- Require that the Buddy System be utilized required when employees are working within the EZ while performing non-standard tasks as identified by the Subcontractor's Safety Officer.

8.3 WORK ZONES

- Support Zone

This area includes the ground outside of the building and any temporary structures/office spaces. The Support Zone starts at the project/property fence line and extends to the entry to where personnel enter the building to complete the work tasks. All personnel shall wear Level D PPE while in the Support Zone. NOTE: Within this area EZs may be established that require restricted access and/or additional PPE depending on the operations, for example: where material handling is performed, where hoisting equipment is located or where equipment is staged.

- Decontamination Unit/Contamination Reduction Zone (CRZ)

The CRZ includes an area to drop off equipment, plastic bags to dispose of protective clothing, adequate soap and water for personnel and equipment decontamination and a means of capturing wash water generated during decontamination. The CRZ shall exist until the completion of Abatement Phase activities. Personnel shall be aware of and follow all site control procedures with respect to entering and exiting the CRZ, to ensure that they are not exposed to contaminants and to minimize the potential for contamination of personnel and the spread of contamination outside the Exclusion Zone (EZ). These measures include having personnel follow the proper procedures for donning and removal of PPE and washing in the CRZ. The measures also address the decontamination procedures for use when moving equipment between zones. The CRZ shall also have a first-aid kit, fire blanket and fire extinguisher (20-lb ABC type.

- Exclusion Zone (EZ)

This area extends from the side of the CRZ facing the building and includes all areas on each floor of the building. This definition of the EZ shall remain effective until Abatement Phase activity on each floor is completed. No employee shall enter the Exclusion Zone without the required training and PPE. No employee shall eat, drink, chew gum, apply cosmetics, smoke or use other tobacco products while in the Exclusion Zone. The employee must first exit the Exclusion Zone and follow decontamination procedures (Section 2.8.2.1) in the CRZ before engaging in any of the above actions. In the event that an employee in the EZ requires a replacement or his/her protective suit or respirator filters, the employee shall exit the EZ and utilize proper decontamination procedures in the CRZ, replace or repair the defective PPE, then reenter the EZ.

9.0 PERSONAL PROTECTIVE EQUIPMENT

Determinations of PPE requirements for site activities are based upon available historical site characterization data and knowledge of the anticipated hazards. Changes in levels of PPE and changes in the PPE requirements for specific areas may be made based following evaluation of the results of monitoring, visual observations and specific conditions associated with site operations.

All PPE shall be provided, used, and maintained in a sanitary and reliable condition per OSHA 29 CFR 1910.132-138 and 1926.28 (Personal Protective Equipment). All selected PPE shall be of construction, design, and material that properly and appropriately fits the employee to protect employees against known or anticipated hazards.

On entering the site and at all locations other than in designated safe locations, all personnel shall have with them and/or wear Level D PPE. Each employee will wear a hard hat and safety glasses or other eye protection at all times while onsite, except for designated “safe” areas.

It is anticipated that most abatement activities in designated EZs can be conducted in Level C personal protective equipment (PPE), based on the EPA concern for potential exposure risks from WTC dust. Level C PPE shall be worn when working inside of the building (with the exception of previously cleaned areas such portions of the first floor occupied by field offices) during all Abatement Phase activities, except where Level B PPE are required for concrete jack hammering in enclosures. Level D will be used when anywhere on the project site but outside of the exclusion zone.

NOTE: Should air sampling data generated during abatement demonstrate that the level of asbestos and CoPCs are consistently below their action level, respiratory protection may be downgraded.

Level D personal protective clothing and equipment for excavation activities includes:

- Coveralls
- Hard hat
- Chemical resistant, ANSI approved safety shoes/boots
- Work gloves
- Safety glasses* (ANSI Approved)
- Dust mask (optional)
- Hearing Protection, as necessary

Level C protective clothing and equipment includes:

- Full-face powered air-purifying respirator (PAPR) with HEPA filter approved by the National Institute for Occupational Safety and Health (NIOSH)/Mine Safety and Health Administration (MSHA)1. Half-face air-purifying respirators (APR) may be used during work preparation activities.
- Gloves - nitrile inner; chemical resistant outer (nitrile or neoprene)
- ANSI-approved safety boots
- Safety glasses* (ANSI Approved)
- ANSI-approved Hard hat with bill facing forward
- Tyvek coveralls with head cover (Two layers Tyvek or equivalent)
- Water-resistant overboots which are treaded to provide slip protection
- Hearing protection (as necessary)

Level B PPE may be required during jack hammering concrete unless engineering controls are instituted incorporating local mechanical exhaust ventilation at the point of dust generation and will be required until personal air monitoring confirms that the level of silica is below the OSHA action level. Level B PPE consists of the following:

- Self-Contained Breathing Apparatus (SCBA) or combination airline/SCBA approved by the National Institute for Occupational Safety and Health (NIOSH)/Mine Safety and Health Administration (MSHA).
- Gloves - nitrile inner; chemical resistant outer (nitrile or neoprene)
- ANSI-approved safety boots
- Safety glasses* (ANSI Approved)
- ANSI-approved Hard hat with bill facing forward
- Tyvek coveralls with head cover (Two layers Tyvek or equivalent)
- Water-resistant overboots which are treaded to provide slip protection
- Hearing protection (as necessary)

Level A PPE Use of this type of PPE is not anticipated at this site. Should work conditions and personnel sampling exceed action levels for a PPE upgrade to Level A, operations shall cease in that area until site conditions can be re-evaluated by the Contractor and the Environmental Consultant's CIH.

*****Eye protection includes safety glasses, safety goggles, welding goggles, welding hoods, or full-face respirators. Prescription or non-prescription eyeglasses and sunglasses are not approved for eye protection. All acceptable eye protection must include side shields and must be ANSI-approved.

10.0 CONTAMINATION REDUCTION PROCEDURES

When exiting the EZ, personnel shall be aware of and follow the procedures used to decontaminate personnel, equipment, and sampling containers. Subcontractors shall ensure that their employees follow proper decontamination and waste disposal procedures. Disposal of PPE and other items shall be performed with material placed in appropriately sized and labeled containers. Specific decontamination procedures are presented in the following subsections. All decontamination procedures shall be in accordance with the Entry/Exit Procedures of NYS Industrial Code Rule 56.

10.1 EQUIPMENT

Since equipment decontamination is difficult, unnecessary equipment shall not be brought into the controlled areas. All materials used in the EZ shall be properly HEPA vacuumed and wet-wiped before leaving the decontamination zone. All equipment that becomes "grossly contaminated", will require an Alconox wash and tap rinse.

10.2 PERSONNEL

Personnel entering containment shall follow proper decontamination procedures as outlined below.

- All employees shall remove all gross contamination and debris from disposal protective clothing and equipment by vacuuming prior to leaving the EZ.
- All employees must be HEPA vacuumed before entering the CRZ.
- Upon entering the CRZ, each employee shall remove the first layer of protective clothing and place it in the appropriate container. If the employee performs duties and becomes "grossly contaminated", the decontamination procedure will include an Alconox (soapy) wash and a tap water rinse of the outer suit, gloves and overboots prior to removal of the outer layer.
- After the employee removes the first layer of Tyvek and gloves, he/she shall then move into a second decon area where the second Tyvek and gloves shall be removed and placed in the appropriate waste container. After this decontamination, personnel shall proceed to a washing facility to take full showers.
- The employee shall dispose of all protective clothing upon exiting the decontamination unit; all half-face APR respirator cartridges, if used, shall be changed out, as needed, but on a daily basis at a minimum. Full-face PAPR cartridges may be utilized more than one day if functioning as designed and sealed and decontaminated after each use.

If additional decontamination steps are necessary, these steps shall be performed and documented by the CSO.

Respirator Maintenance Procedure:

1. All respirators will be cleaned, sanitized, inspected, assembled, and maintained ready for use on a daily basis.
2. Each respirator will be stored in a clean and sanitary container.
3. Prior to use, the wearer will inspect the respirator, including the valves, valve covers, nosepiece, straps, eyepiece (for fullface respirators), face piece and its snaps, cylinders, and canisters to insure that the respirator can be worn.

4. Each employee will be responsible for cleaning, inspecting, maintaining, sanitizing, and storage of his/her respirator equipment.
5. If a respirator becomes chemically contaminated or malfunctions, the respirator will be replaced by the employer with a clean and sanitized respirator, and the contaminated/defective respirator shall be decontaminated and repaired before reuse, or tagged "out of service" and disposed of.
6. The respirator wearer shall inspect the replacement respirator for defective parts and leaks and will be fit tested if the replacement respirator is of a different make, model or size than the original.

10.3 CONTAMINATION PREVENTION

Work practices that minimize the spread of contamination will reduce worker exposure and help ensure valid sample results by precluding cross-contamination. Procedures for contamination avoidance include the following:

- Know the limitations of all PPE being used;
- Avoiding walking through areas of obvious or known contamination;
- Refrain from handling or touching contaminated materials directly;
- Do not sit or lean on potentially contaminated surfaces;
- Ensure PPE has no cuts or tears prior to donning;
- Fasten all closures on suits, covering with tape if necessary;
- Take steps to protect against any skin injuries;
- Stay upwind of airborne contaminants; and
- When working in contaminated areas, refraining from eating, chewing gum, smoking, or engaging in any activity from which contaminated materials may be ingested.

10.4 DISPOSAL PROCEDURES

All discarded materials, waste materials, or other field equipment and supplies should be handled in such a way as to preclude the spread of contamination, creating a sanitary hazard, or causing litter to be left on-site. All potentially contaminated waste materials (e.g., clothing, gloves) shall be placed in appropriately sized and labeled containers. Appropriate labels shall be affixed to all containers.

11.0 GENERAL WORK PRECAUTIONS

11.1 GENERAL WORK PRECAUTIONS

The following general work precautions apply to all Site personnel:

- Eating, drinking, chewing gum or tobacco, smoking, or any practice that increases the probability of hand-to-mouth transfer and ingestion of material is prohibited in the work area.
- Hands and face must be thoroughly washed upon leaving the work area. Wash water will be provided at the Site for this purpose.
- Whenever levels of chemical contaminants warrant, the entire body should be thoroughly washed, as soon as possible, after the protective coveralls and other clothing are removed as part of the decontamination process.
- No facial hair that interferes with a satisfactory fit of the mask-to-face-seal is allowed on personnel required to wear respirators.
- Contact with contaminated or suspected contaminated surfaces should be avoided. Whenever possible, do not walk through puddles, leachate, discolored surfaces, kneel on ground, lean, sit, or place equipment on drums, containers, or the ground.
- Medicine, drugs and alcohol may interfere with or impair judgment and reaction times. Therefore, usage of prescribed drugs must be specifically approved by a qualified physician and made known to the Field Team Leader prior to an individuals' presence on the work-site.
- Alcoholic beverage intake is strictly prohibited at the Site and prior to work.
- All personnel must be familiar with standard operating procedures and any additional instructions and information contained in the HASP.
- All personnel must adhere to the requirements of the HASP.
- Contact lenses are not permitted when respiratory protection is required or where the possibility of a splash exists.
- Personnel must be cognizant of symptoms for chemical exposure onsite, for heat stress and cold stress, and knowledgeable regarding emergency measures contained in the Emergency Plan.
- Respirators shall be cleaned and disinfected after each day's use or more often, if necessary.
- Prior to donning, respirators shall be inspected for worn or deteriorated parts. Emergency respirators or self-contained devices will be inspected at least once a month and after each use.
- Each employee shall be familiar with the project's Respiratory Protection Program.

11.2 OPERATIONAL PRECAUTIONS

The following operational precautions must be observed at all times:

- All Site personnel shall be adequately trained and thoroughly briefed on anticipated hazards, equipment to be worn, safety practices to be followed, emergency procedures, and communications.
- All Site personnel shall use the buddy system when wearing respiratory protective equipment.

- At a minimum, a third person, suitably equipped as a safety backup, is required during extremely hazardous entries.
- During continual operations, on-site workers act as a safety backup to each other. Off-site personnel provide emergency assistance.
- Personnel should practice any unfamiliar operations prior to undertaking the actual procedure.
- Entrance and exit locations shall be designated and emergency escape routes delineated.
- Warning signals for Site evacuation must be established.
- Personnel and equipment in the contaminated work area should be minimized, consistent with effective Site operations.
- Work areas for various operational activities shall be established.
- Procedures for leaving a contaminated area shall be planned and implemented prior to going on-site. Work areas and decontamination procedures shall be established based on expected Site conditions.
- Frequent and regular inspection of Site operations will be conducted to ensure compliance with the HASP.
- If any changes in operation occur, the HASP will be modified to reflect those changes.

12.0 SANITARY FACILITIES

12.1 POTABLE WATER

a. An adequate supply of potable drinking water shall be maintained at all times immediately outside the Site. Drinking water shall meet all federal, state and local health requirements.
b. Drinking water shall be supplied to project personnel via approved dispensing sources.
c. Paper cups shall be permitted for the drinking of potable water supplies.
d. Drinking water dispensers shall be clearly marked and shall, in no way, have the potential for contamination from non-potable supplies.
e. Site personnel must be fully decontaminated prior to approaching the drinking water supply.

12.2 TOILET FACILITIES

a. Adequate toilet facilities shall be provided at the Site.
b. These facilities shall be in the form of portable chemical toilets.
c. Routine servicing and cleaning of the toilets should be established with the selected contractor and shall be in accordance with federal, state, and local health regulations.
d. Site, personnel must be fully decontaminated prior to approaching the toilet facilities.

12.3 WASHING AREAS

a. Adequate washing areas shall be provided for personal use within the work area.
b. Washing areas shall be maintained in a sanitary condition and will be provided with adequate supplies of soap, towels for drying, and covered waste receptacles.
c. Washing areas shall be maintained and sanitized daily.
d. No eating, drinking or smoking shall be permitted in the work area. This policy will be strictly enforced by the Field Team Leader.

13.0 FIRE CONTROL EQUIPMENT

An adequate number of approved portable fire extinguishers (class rated A, B and C) shall be readily available at the Site at all times.

All Site personnel shall be trained in the use of the extinguishers. Extinguishers shall only be used on outbreak stage fires or fires of minor nature. The local fire department shall be contacted in the event of a larger fire.

14.0 HAZARD COMMUNICATION

The Contractor and Subcontractors shall notify the Contractor CSO of any hazardous products prior to bringing the chemical on site and shall provide a MSDS for each product. These MSDSs shall be maintained by the Contractor CSO and shall be kept in a site master file. In addition, each Subcontractor shall maintain a copy of the MSDS for each product that they bring on-site.

The CSO will have the responsibility to review MSDSs for hazardous materials proposed for the site in order to investigate potential alternate products that are non-hazardous.

The Subcontractor shall review with the Contractor CSO the procedures for handling, using and storing the chemicals brought on-site, and shall review with their personnel the proper procedures for handling, using and storing the chemicals before the product is used on-site. This includes but is not limited to all commercial products brought on-site by Subcontractors, including commercial cleansers, degreasers, lubricants and paints.

14.1 Container Labels

All containers of hazardous materials shall be labeled in accordance with appropriate standards. The labels on containers provided by the manufacturer, importer, or distributor shall be used.

Labels affixed to containers of hazardous materials shall:

- Identify the material using a name with which workers are familiar,
- Identify the hazards associated with the material, including toxicity information
- Identify the material using a name with which workers are familiar.
- Identify the hazards associated with the material, including toxicity information that indicates symptoms and target organs.
- Identify the name, address, and telephone number of the manufacturer, importer or distributor where more information may be obtained.

Labels shall not conflict with Hazardous Materials Transportation Act (HMTA) labeling requirements and shall meet the requirements of OSHA substance-specific health standards, where required.

Labeling of all portable/temporary hazardous materials containers shall be required of all portable/temporary hazardous materials containers at all times. The contractor/subcontractor shall prepare a container label on portable containers filled from a correctly labeled container and when the container label is defaced or illegible. The prepared temporary label shall indicate pertinent chemical identification and health information as required by OSHA.

All hazardous materials containers shall be labeled for content, hazard, and storage prohibitions, such as those relating to temperature range and chemical incompatibility with other materials and/or wastes. The labels shall be in compliance with requirements of New York State law. Containers containing hazardous waste shall also be labeled or marked clearly with the words, “Hazardous Waste”.

14.2 Material Safety Data Sheets (MSDSs)

All MSDSs shall be submitted by the Subcontractors and shall be maintained by the Contractor CSO within a site master file. In addition, each Subcontractor shall maintain a copy of the MSDS for each product that they bring on-site. In addition, each Subcontractor shall also retain a log of MSDSs for chemicals used on this project and this log shall be kept on-site. The location of the MSDS folder shall be made known to all project employees.

Each Subcontractor shall review incoming MSDSs for new or significant health and safety information and shall ensure that any new information is communicated to affected employees, the Contractor SSM and other subcontractors. If an MSDS is not received at the time of initial shipment of materials, the material may not be used until the MSDS has been obtained from the manufacturer.

Employees shall be instructed to notify their Site Manager if an MSDS is not available. When a revised MSDS is received, the Site Manager shall immediately replace the old MSDS. Subcontractors shall insure that the MSDSs on file for their chemicals are current (updated within the last two years)

15.0 ELECTRICAL LOCKOUT/TAGOUT

The Field Team Leader must approve all work in areas requiring lockout/tagout procedures. Specific procedures and permitting requirements will be specified in the HASP, or in a revised HASP based on the need for a worker to work around electrical equipment.

All systems must be locked out and tagged before the work begins. This includes pipes, air lines, electrical equipment and mechanical devices. The equipment must be start tested and approved for use by a worker by the Health and Safety Coordinator or the Field Team Leader by start-testing to make sure the locked-out equipment does not operate.

16.0 EMERGENCY RESPONSE

Below is a list of unplanned events that may occur during the abatement and demolition project. This list may not be comprehensive, but is representative of the types of events that may occur. These include:

- Fire or explosion
- Power failure
- Structural failure
- Medical Emergency

16.1 FIRE OR EXPLOSION

In the event of an explosion or a fire, the CSO shall immediately:

1. Call 911;
2. Initiate building evacuation procedures as outlined in the Emergency Plan (Page 6) of this HASP;
3. Meet First responders at the pre-designated location (unless circumstances dictate otherwise, it is the security desk at the Building) for briefing on the scope and nature of the emergency; and
4. Notify OWNER.

Should there be a work stoppage in a certain area due to a fire or an explosion, work will not resume until the CSO verifies that appropriate corrective actions have been taken.

16.2 POWER FAILURE

In the event of a power failure, the CSO shall immediately:

1. Call 911, if warranted;
2. Notify on site Electrician to evaluate issue;
3. Coordinate with the Site Manager to initiate containment isolation activities to include;
4. Immediately seal Personnel and Waste Load Out Decontamination units to prevent a fiber release until power is restored;
5. Coordinate with the Site Manager to initiate back-up power generation; and
6. All containment isolation barriers are to remain secure until the required negative pressure has been re-established.

16.3 STRUCTURAL FAILURE

Deconstruction process will create weakened sections as supporting elements are removed, such as roof sheathing, wall sheathing. In the event of an unanticipated structural failure, the CSO shall immediately:

1. Call 911, if warranted;
2. Coordinate with the site manager and abatement contractor to initiate containment isolation activities (e.g. both the Personnel and Waste Load Out Decontamination units must be immediately sealed to prevent a fiber release); and
3. All containment isolation barriers are to remain secure until the required negative pressure has been re-established.

16.4 MEDICAL EMERGENCY

The first worker who notices that a medical emergency or personal injury has occurred shall immediately make a subjective decision as to whether the emergency is life threatening and/or otherwise serious.

Potential injuries that may result in a medical emergency include:

- Slips, trips, falls, lacerations
- Trauma injuries caused by being struck by heavy equipment, building components, waste containers, etc.
- Eye injuries
- Burns from electrical, fire or explosion
- Electrical contact or electrocution
- Heat stress/stroke
- Chemical exposures
- Cardiac emergencies
- Respiratory emergencies

The Contractor and its subcontractors will respond to minor injuries requiring first aid only; major injuries or requirements for search and rescue will be handled by First Responders.

If a worker is showing signs of distress or obvious injury or illness, the CSO shall be immediately notified and provided the following information:

1. Location of victim
2. Nature of Emergency
3. Whether the victim is conscious
4. Specific details regarding the injury or illness
5. Whether the victim is in need of decontamination

The CSO will suspend work within the immediate area until the emergency situation has been corrected. If possible the subcontractors' first aid attendant shall treat the injured employee as necessary until a decision is made to seek outside medical assistance or to remove the victim from the Building.

The CSO will be responsible for calling 911 and will inform the First Responders whether asbestos abatement activities are taking place within the Building, and whether or not the injured employee has been brought through the decontamination chamber.

16.4.1 Life-Threatening and/or Otherwise Serious Incident

If a life-threatening incident occurs, those persons recognizing the situation should do whatever actions that are within their capabilities to reduce the threat and then the Contractor CSO shall be contacted. The Contractor CSO shall immediately notify the Emergency Medical Services (EMS-911) and implement emergency action procedures to have someone meet and guide EMS to the incident location. The Contractor shall be notified of the incident as early as possible.

The Contractor CSO shall be kept apprised of the situation and the location of the victim(s).

As the Contractor CSO proceeds to the accident scene, communications channels shall be opened and kept on standby until the Contractor CSO has surveyed the scene and performed a primary survey of the victim.

The Contractor CSO shall provide emergency action guidance consistent with the injury and shall relay the appropriate information to the site person meeting the EMS. Depending on the nature of the injury and the location at which the injury occurred, the Contractor CSO shall determine whether the person can be moved or whether the EMS team will need to come into the work area to assist the victim. Should the victim be injured in the EZ, all appropriate life-saving methods shall be exercised in that area before attempting decontamination of the victim. The extent of emergency decontamination performed shall depend on the severity of the injury or illness and the nature of the contamination. If the emergency is such that emergency decontamination cannot be performed safely, the victim shall be given necessary first-aid treatment and wrapped in a blanket prior to transportation by EMS. If heat stress is a factor in a victim's injury/illness, all protective clothing shall be removed from the victim immediately.

16.4.2 Non-Life-Threatening Incident

Should it be determined that no threat to life is present, a co-worker will assist the injured person and contact the Contractor CSO as soon as reasonably possible. Should the victim be injured in the EZ, a rapid decontamination consisting of Tyvek, glove and respirator removal shall be performed in the CRZ prior to initiation of medical assistance. For all non-life-threatening injuries, all medical assistance shall be provided in the Support Zone to reduce the spread of contamination to medical personnel or equipment.

16.4.3 Bloodborne Pathogens

When an emergency occurs that involves the potential for contact with bodily fluids, personnel shall use procedures and PPE that minimize the potential for exposure.

All personnel who provided direct support to an injured person shall participate in a post-incident exposure review during which their role in the event and the potential for contact with bodily fluids shall be evaluated. The information relating to exposure shall be documented for each individual. The procedures for the post-exposure consultation identified in the OSHA Bloodborne Pathogens (BBP) Standard (29 CFR 1910.1030) shall be followed.

All personnel on-site shall receive awareness training concerning BBP and the procedures to be followed to respond to emergencies that occur on-site. This awareness training shall be provided by each Subcontractor prior to the initiation of work activities and when new employees are introduced to the Site

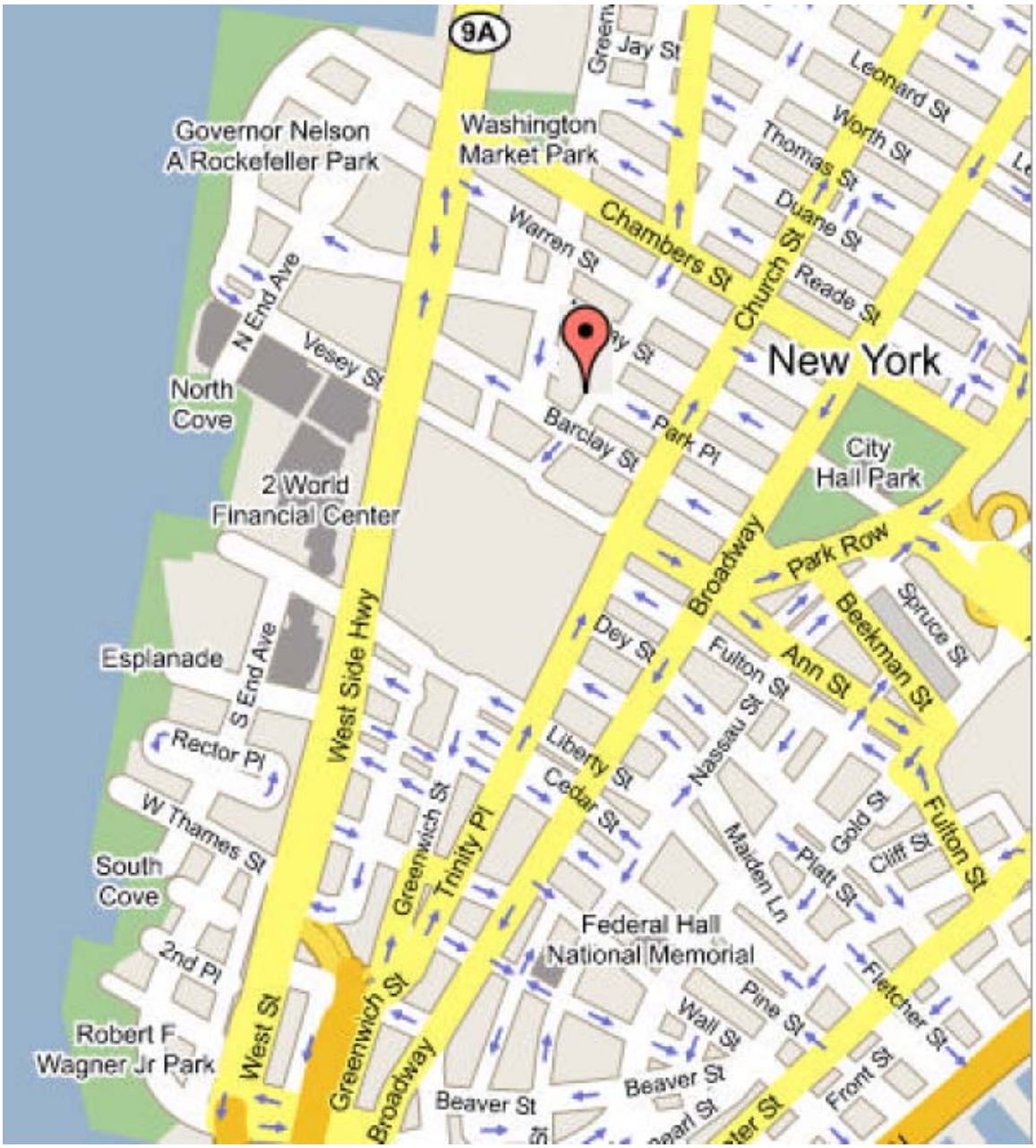
17.0 DOCUMENTATION

Each Subcontractor shall maintain documentation, as established by the Contractor, which shall record, at a minimum, the following information:

- The Subcontractor employees on Site, including arrival and departure times and their destination at the Site.
- Information required to be maintained by the OSHA respiratory protection standard, including medical clearance documents, training and certification records, fit-test records, and the results of personal air monitoring used to determine employee exposures. Additionally, all medical and sampling documentation required by OSHA's Lead in Construction standard must be maintained.
- Area air testing results
- Incidents and unusual activities that occur at the Site, including but not limited to injuries, illnesses, accidents, spills, breaches of security, equipment failures, weather-related problems and near-misses.
- Records of daily safety briefings, including attendance documentation for all employees required to attend.
- Records of health and safety inspections by governmental agencies
- Records of corrective actions performed in response to any deficiencies noted through government agency inspection or by the Contractor SSM.

Attachment 1

Location Map
Fiterman Hall
30 West Broadway, NewYork, NY 10007



Attachment 2

Contractor/Sub-Contractor/Visitor HASP Acknowledgement

HASP Received by: _____ Date: _____

Print Name _____

Affiliation: _____

Address _____ Phone_____

_____ is the designated Contractor Safety Officer (CSO) for this project. His contact numbers are _____ as indicated in Attachment 1.

These are the primary Contractor emergency contact phone numbers, and both are 24-hour contact numbers. The CSO's base of operations will be the Contractor's field office (trailer). In the event that Mr. _____ is not on site, an alternate CSO will be designated and will be responsible for ensuring proper implementation of this HASP.

Signature Date

_____ _____

Attachment 3

Worker Hygiene and Protection

Work clothes include tyvek full body work clothing, gloves, hardhats, disposable shoe coverlets, safety vests and vented goggles. These items will be provided as required and laundered according to the requirements of 29 CFR 1926.62.

Employees will be required to observe the following procedures:

1. Change into work clothing and shoe covers in the designated area.
2. Use work garments and appropriate protective gear including respirators before entering the work area; and
3. Store any clothing not worn under protective clothing in the designated area.

When leaving the work area, employees will:

HEPA vacuum all contaminated protective work clothing while it is still being worn. Worker Hygiene and Protection

In addition to the engineering controls previously mentioned, Airtek Environmental Corporation will provide the necessary personal protective clothing and equipment to potentially exposed employees. Work clothes include tyvek full body work clothing, gloves, hardhats, disposable shoe coverlets, safety vests and vented goggles. These items will be provided as required and laundered according to the requirements of 29 CFR 1926.62.

Employees will be required to observe the following procedures:

4. Change into work clothing and shoe covers in the designated area.
5. Use work garments and appropriate protective gear including respirators before entering the work area; and
6. Store any clothing not worn under protective clothing in the designated area.

When leaving the work area, employees will:

1. HEPA vacuum all contaminated protective work clothing while it is still being worn. At no time may lead be removed from protective clothing by any means which results in uncontrolled dispersal of lead.
2. Remove shoe covers (these must not be left in work area). Work area must be left clean before lunch and at end of the day.
3. Remove protective clothing and gear in the controlled section of the designated changing area. Remove protective coveralls by carefully rolling down the garment to reduce exposure to dust.
4. Remove respirator last.

In addition to the procedures described above, employees will obey the following procedures at all sites:

1. Place all disposal coveralls and shoe covers with the abatement waste.

2. Contaminated clothing, which is to be cleaned, laundered or disposed of, must be placed in a clearly marked closed container in the designated changing area.
3. Clean protective gear in accordance with the Airtek training sessions and respiratory program. Wash hands and face.

Eating areas or lunchrooms will be the only area in which employees may eat and drink during the work shift. Employees may not wear their protective clothing in this area.

Employees will be required to wash prior to using the designated eating area.

5. At no time may lead be removed from protective clothing by any means which results in uncontrolled dispersal of lead.
6. Remove shoe covers (these must not be left in work area). Work area must be left clean before lunch and at end of the day.
7. Remove protective clothing and gear in the controlled section of the designated changing area. Remove protective coveralls by carefully rolling down the garment to reduce exposure to dust.
8. Remove respirator last.

In addition to the procedures described above, employees will obey the following procedures at all sites:

4. Place all disposal coveralls and shoe covers with the abatement waste.
5. Contaminated clothing, which is to be cleaned, laundered or disposed of, must be placed in a clearly marked closed container in the designated changing area.
6. Clean protective gear in accordance with the Airtek training sessions and respiratory program. Wash hands and face.

Eating areas or lunchrooms will be the only area in which employees may eat and drink, during the work shift. Employees may not wear their protective clothing in this area. There will be no smoking on the work site.

Employees will be required to wash prior to using the designated eating area.

Personnel Entrance and Decontamination Procedures Utilizing Full Decontamination Facility:

NOTE: Medical emergencies take priority over decontamination procedures.

1. All workers and authorized visitors shall enter the work area through the worker decontamination enclosure system.

2. All individuals who enter the work area shall sign the entry log, located in the clean room, upon each entry and exit. The log shall be permanently bound and shall identify fully the facility, agents, contractor(s), the project, each work area and worker respiratory protection employed. The site supervisor shall be responsible for the maintenance of the log.

3. Each worker or authorized visitor shall, upon entering the job site, remove street clothes in the clean room and put on a clean respirator (with new filters, if appropriate) and clean protective clothing before entering the work area through the shower room and equipment room.

4. Each worker or authorized visitor shall, each time he leaves the work area: remove gross contamination from clothing before leaving the work area; proceed to the equipment room and remove all clothing except the respirator; still wearing the respirator, proceed to the shower room; clean the outside of the respirator with soap and water while showering; remove filters, wet them, and dispose of them in the container provided for that purpose; wash and rinse the inside of the respirator; and thoroughly shampoo and wash himself/herself.

5. Following showering and drying off, each worker or authorized visitor shall proceed directly to the clean room, dress in street clothes, and exit the decontamination enclosure system immediately. Disposable clothing of the type worn inside the work area is not permitted outside the work area.

Attachment 4

Medical Emergencies

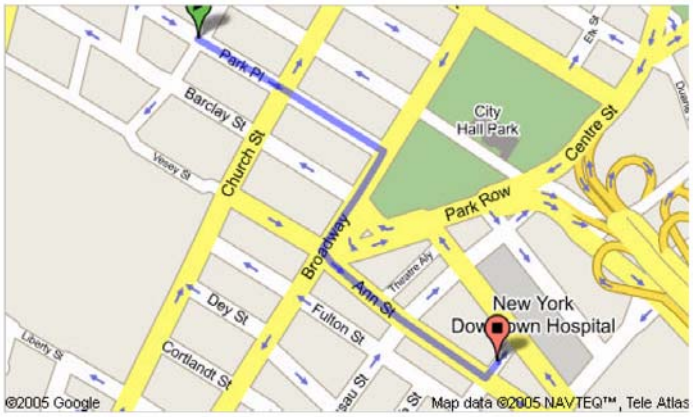
MAJOR MEDICAL EMERGENCIES

- **If it is not practical to move the ill or injured individual**, call **911** to obtain an ambulance and escort it to the location of the emergency.

- For job sustained injury/illness, all patients must be taken to either

  NYU Downtown Hospital

  (212) 312-5000
  170 William St
  New York, NY 10038



Start address: 30 W Broadway
New York, NY 10007

End address: 170 William St
New York, NY 10038

Distance: 0.5 mi (about 1 min)

1. Head **southeast** from **Park Pl** - go **0.2 mi**
2. Turn **right** at **Broadway** - go **0.1 mi**
3. Turn **left** at **Ann St** - go **0.2 mi**
4. Turn **left** at **William St** - go **0.0 mi**

These directions are for planning purposes only. You may find that construction projects, traffic, or other events may cause road conditions to differ from the map results.

  or their own hospital of choice. Hospital personnel must be told it is an on-the-job injury, if applicable. A First Report of Injury Form must be filed with the Site Manager.

- When the injury or illness involves a chemical, a Material Safety Data Sheet (MSDS) must accompany the victim to the hospital.

MINOR MEDICAL EMERGENCIES

- On-the-job, minor medical injuries/illness (e.g. falls, cuts, sprains and strains) involving employees must be reported immediately to the injured person's supervisor. The supervisor must fill out a Record of Occupational Injury Form. If medical attention is required, the injured can be taken to **NYU Downtown Hospital's Emergency Room,** 170 William St New York, NY 10038 **(**212- 312-5000**)** or the injured person's **physician of choice.**

Attachment 5

LIST OF ACRONYMS

ACBM	Asbestos Containing Building Materials
ANSI	American National Standards Institute
APR	Air-Purifying Respirator
CFR	Code of Federal Regulations
CIH	Certified Industrial Hygienist
COPCs	Contaminants of Potential Concern
CPR	Cardiopulmonary Resuscitation
CRZ	Contamination Reduction Zone
CSO	Contractor Safety Officer
CUNY	City University of New York
DASNY	Dormitory Authority of New York
dBA	decibels adjusted (decibels on the "A" scale)
EC	Emergency Coordinator
EMS	Emergency Medical Service
EMT	Emergency Medical Technician
ER	Emergency Response
ERT	Emergency Response Team
EZ	Exclusion Zone
f/cc	Fibers per cubic centimeter
GFCI	Ground Fault Circuit Interrupter
HAZWOPER	Hazardous Waste Operations and Emergency Response
HCS	Hazard Communication Standard
HEPA	High Efficiency Particulate Air
HMTA	Hazardous Materials Transportation Act
IC	Incident Commander
IDLH	Immediately Dangerous to Life and Health
lbs	pounds
LEL	Lower Explosive Limit
MAWP	Maximum Allowable Working Pressure
mg/m3	milligrams per cubic meter
MSDS	Material Safety Data Sheet
MSHA	Mine Safety and Health Administration
NIOSH	National Institute for Occupational Safety and Health
NYCDEP	New York City Department of Environmental Protection
NYCSSM	New York City Site Safety Manager
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limits
PM	Project Manager
PPE	Personal Protective Equipment
ppm	parts per million
psia	pounds per square inch, absolute
psig	pounds per square inch, gauge
SAR	supplied air respirator
SCBA	self-contained breathing apparatus
SOW	Scope of Work
SSHO	Site Safety and Health Officer
STEL	Short-Term Exposure Limit
SZ	Support Zone
TWA	Time-Weighted Average
WTC	World Trade Center